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UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte KOICHI HAGIWARA and JIRO WATANABE

Appeal 2008-002132
Application 10/006,568
Technology Center 3700

Decided: August 18, 2009

Before JENNIFER D. BAHR, STEVEN D.A. McCARTHY, and FRED A. SILVERBERG, *Administrative Patent Judges*.

SILVERBERG, *Administrative Patent Judge*.

DECISION ON APPEAL

STATEMENT OF THE CASE

Having had claims twice rejected, Koichi Hagiwara et al. (Appellants) seek our review under 35 U.S.C. § 134 of the rejection of claims 1, 3, 4, 6, 7, 14 and 15. We have jurisdiction under 35 U.S.C. § 6(b) (2002).

SUMMARY OF DECISION

We REVERSE.

THE INVENTION

The Appellants' claimed invention is directed to the spraying from an injection nozzle of a mixture of a pressurized gas, a pressurized liquid and a granular material onto an object to be cleaned (Spec. 1, 7: ¶¶ [0001] and [0007]).

Claim 1, reproduced below, is representative of the subject matter on appeal.

> 1. A cleaning and releasing device for spraying a jet flow onto an object to be cleaned, comprising:
>
> an injection nozzle which mixes a pressurized liquid and a pressurized gas in said injection nozzle and injects the pressurized liquid and the pressurized gas;
>
> a pressurized liquid flow passage for supplying the pressurized liquid to said injection nozzle;
>
> a pressurized gas flow passage for supplying the pressurized gas to said injection nozzle;
>
> operating means for supplying and stopping the pressurized liquid to said injection nozzle, said operating means being provided in said injection nozzle or on the flow passage of the pressurized liquid in communication with said injection nozzle;
>
> detecting means for detecting supply and stop of the pressurized liquid generated by an operation of said operating means, said detecting means being provided in a position on said pressurized liquid flow passage;
>
> a switching valve provided in the flow passage of the pressurized gas and serving to

supply and stop the pressurized gas to said injection nozzle; and

a controller for controlling a switching operation of said switching valve based on a detection signal transmitted from the detecting means;

wherein the controller opens said switching valve based on a detection signal transmitted from the detecting means so as to supply the pressurized gas to said injection nozzle when the injection of the pressurized liquid from said injection nozzle is detected by said detecting means; and

wherein the controller closes said switching valve based on a detection signal transmitted from the detecting means so as to stop the supply of the pressurized gas to said injection nozzle when the stop of the injection of the pressurized liquid from said injection nozzle is detected by said detecting means.

THE REJECTIONS

The Examiner relies upon the following as evidence of unpatentability:

Woodward	US 5,312,040	May 17, 1984

The following rejections by the Examiner are before us for review:

1. Claims 7 and 15 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicants regard as the invention.
2. Claims 1, 3, 4, 6, 7 and 14 are rejected under 35 U.S.C. § 102(b) as being anticipated by Woodward.

ISSUES

The issues before us are whether: (1) the Examiner erred in concluding that there is a structural gap in claims 7 and 15 that renders these claims indefinite (App. Br. 12); and (2) the Examiner erred in finding that Woodward describes an injection nozzle that mixes a pressurized liquid and a pressurized gas as called for in independent claims 1 and 6 (App. Br. 15).

ANALYSIS

Rejection of claims 7 and 15 under 35 U.S.C. § 112

Appellants contend that claims 7 and 15 meet the requirements of 35 U.S.C. § 112 for definiteness (App. Br. 12). Appellants further contend that whether a claim is distinguishable from the prior art is not relevant to whether the claim satisfies the requirements of 35 U.S.C. § 112 (App. Br. 14).

The Examiner found that claims 7 and 15 contain functional limitations that are not commensurate in scope with the structural limitations claimed (Ans. 3, 8). The Examiner further found that "[w]hile features of an apparatus may be recited structurally or functionally, claims directed to an apparatus must be distinguished from the prior art in terms of structure rather than function." (Ans. 3, 9).

We agree with Appellants that whether a claim is distinguishable from the prior art is not relevant as to whether the claim satisfies the requirements of 35 U.S.C. § 112.

The Examiner's position, as we understand it, is that there is a structural gap in claims 7 and 15, because they do not recite the specific structure by means of which the controller controls the supply and stop of the pressurized gas. It appears that the Examiner may be confusing claim

breadth with indefiniteness. A claim that is broad does not mean that it is indefinite, that is, undue breadth is not indefiniteness. *In re Johnson*, 558 F.2d 1008, 1016 n.17 (CCPA 1977).

We find that a person having ordinary skill in the art would understand the subject matter called for in claims 7 and 15. We agree with Appellants that claims 7 and 15 meet the requirements of 35 U.S.C. § 112 for definiteness. *Orthokinetics, Inc. v. Safety Travel Chairs, Inc.*, 806 F.2d 1565, 1576 (Fed. Cir. 1986) (holding that the test for definiteness under 35 U.S.C. § 112, second paragraph, is whether "those skilled in the art would understand what is claimed when the claim is read in light of the specification.").

We thus conclude that the Examiner erred in rejecting claims 7 and 15 under 35 U.S.C. § 112, second paragraph, as being indefinite.

Rejection of claims 1, 3, 4, 6, 7 and 14 under 35 U.S.C. § 102(b) as being anticipated by Woodward

Appellants contend that Woodward does not describe a device which mixes a pressurized liquid and a pressurized gas, as Woodward is directed to a device which supplies either a pressurized liquid or a pressurized gas (App. Br. 15). Appellants further contend that Woodward supplies pressurized gas 61 to the nozzle 118 only in response to the pressurized liquid being diverted away from the nozzle 118 to the dump 120 (App. Br. 16). Appellants still further contend that Woodward does not describe the invention as called for in claim 1 (App. Br. 16). Appellants still further contend that in Woodward, (1) the residual liquid moisture referred to in column 7, lines 19-24 is liquid that is left over after the pressurized liquid is diverted away from nozzle 118, (2) that whatever residual moisture remained is not a pressurized liquid, and

(3) mixture of the residual moisture and the gas is not a mixture of a pressurized liquid and a pressurized gas (App. Br. 20).

The Examiner found that Woodward (1) describes the structural limitations called for in claim 1, and (2) has the ability to perform the function of mixing a pressurized liquid and a pressurized gas in the injection nozzle (Ans. 9). The Examiner further found that one of ordinary skill in the art guided by the teachings in Woodward would recognize that a pump malfunction while water is flowing through barrel 116 which resulted in a pressure of 500 psi would actuate valve 14 to open inlet 22 and allow pressurized gas to flow into barrel 116 resulting in a mixture of pressurized water and pressurized gas (Ans. 9-10).

The ordinary meaning of the word "pressurize" includes "to put (gas or liquid) under a greater than normal pressure." THE AMERICAN HERITAGE® DICTIONARY OF THE ENGLISH LANGUAGE (4th ed. 2000).

We find that normal pressure is atmospheric pressure.

In order for a fluid or liquid to be pressurized, it must be of greater than normal pressure, that is, greater than atmospheric pressure.

Woodward describes that when the jetting is interrupted, that is, when the high pressure fluid stream 33 is directed to the nozzle dump 120, only compressed gas 60 and some residual moisture from the diverted high pressure fluid stream 33 is present in the nozzle 118 (col. 7, ll. 1-24; fig. 4). Therefore, Woodward describes that the compressed gas 60 flows only in the absence of the flow of high pressure fluid stream 33.

In Woodward, while the fluid is initially of high pressure, any residual moisture present in the nozzle 118 would not retain that high pressure, that

is, the residual moisture would not be under greater than normal pressure. Therefore, the residual moisture would not be pressurized.

Therefore, we agree with Appellants that in Woodward, a mixture of the residual moisture and the gas is not a mixture of a pressurized liquid and a pressurized gas.

Further, in Woodward, it is speculative, at best, as to whether any high pressure fluid would still be in the nozzle when the compressed gas flows through the nozzle 118 during a pump malfunction.

Therefore, since Woodward describes that the compressed gas flows only in the absence of the flow of high pressure fluid, the Examiner has erred in finding that Woodward has the ability to mix a pressurized liquid and a pressurized gas in the injection nozzle.

Accordingly, Woodward does not anticipate claims 1 and 6. For the same reasons, Reed does not anticipate claims 3, 4, 7 and 14, which depend from claims 1 and 6, respectively.

CONCLUSIONS OF LAW

Appellants have established that the Examiner erred in concluding that claims 7 and 15 were indefinite. Appellants have established that the Examiner erred in finding that Woodward describes an injection nozzle that mixes a pressurized liquid and a pressurized gas as called for in claims 1 and 6.

DECISION

The decision of the Examiner to reject claims 7 and 15 under 35 U.S.C. § 112, and claims 1, 3, 4, 6, 7 and 14 under 35 U.S.C. § 102(b) over Woodward is reversed.

REVERSED

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